

User Notes on 2000 Decennial Census Tabulations of Households Estimated to be Income Eligible for LIHEAP

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The U.S. Department of Health and Human Services (HHS) administers at the Federal level the Low Income Home Energy Assistance Program (LIHEAP). LIHEAP is administered within HHS through the Office of Community Services (OCS) within the Administration for Children and Families (ACF). The Census Bureau has prepared State-level data for OCS on the estimated number of income eligible households for LIHEAP (hereafter referred to as "low income" households) as of April 1, 2000.²

The data are tabulated from the 2000 Decennial Census, which is the most recent source of State-level data on low income households. Consequently, the data are already several years old. It is not known to what degree the data would change, by State, if more recent data were available.

Information from the 2000 Decennial Census is derived either from questions asked of the entire population (short-form questionnaire) or from questions asked of a sample of the population (long-form questionnaire).³ Both questionnaires were mailed to respondents in March 2000. Respondents were asked to mail the completed questionnaires to the Census Bureau by April 1, 2000.

The Census Bureau prepared the data using the 2000 Decennial Census Sample Edited Detail File. This computer file contains the weighted and edited population and housing data from all the households in the U.S. that received the long-form questionnaire. The data file is subject to confidentiality restrictions, and is not available to the public.

The special tabulations were prepared by the Census Bureau's Computer Applications and Processing Staff, under the general direction of John F. Long, Chief of the Population Division. For general information about the 2000 Decennial Census content, coding, data collection, and special tabulations, contact:

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To aid in understanding how the data on low income households were derived from the 2000 Decennial Census, the following topics are covered in this paper:

1. Low income household tabulations

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²As used in this paper, low income refers to those households with incomes at or below the greater of 150 percent of the poverty level for their State or 60 percent of State median income. These are the income maximums set out in section 2605(b)(2) of the LIHEAP statute (42 U.S.C. 8624).

³The sampling rate for the long-form questionnaire was about 15.8 percent of all housing units and 15.4 percent of all persons in the U.S. Approximately 18.345 million housing units and 43.459 million persons were sampled with the long-form questionnaire in the 2000 Decennial Census.

2. Sample estimates
3. Definitions and annotations
4. Organization of the tables
5. Excel files

Low Income Household Tabulations

In tabulating data on the number of low income households, OCS made certain decisions about the definition of low income households and the methodology to be followed. These decisions are described below.

Low Income Households

Section 2605(b)(2) of the LIHEAP statute limits the provision of home energy assistance to income eligible households (households with incomes at or below the greater of 150 percent of the poverty level or 60 percent of the State median income), and categorically eligible households (households with at least one member receiving Temporary Aid for Needy Families (TANF), Supplemental Security Income (SSI), food stamps, or certain need-tested veterans' benefits). Accordingly, the maximum number of households to which a State may provide LIHEAP assistance equals the sum of income eligible households and those categorically eligible households above the Federal LIHEAP income standard. The 2000 Decennial Census is not as reliable a source of information about LIHEAP categorical eligibility when it is compared to LIHEAP income eligibility. Consequently, the counts of low income households for each State are for income eligible households.⁴

The following qualifications apply in estimating the number of low income households with incomes at or below the Federal LIHEAP income standard:

1. States may set income standards lower than the Federal LIHEAP income standard as long as their income standards are not set below 110 percent of the poverty level. Consequently, the number of income eligible households under a State's LIHEAP income standard may be lower than under the Federal LIHEAP income standard.
2. States typically operate LIHEAP for part of the year. No national data source currently provides State-level, seasonal information on income or categorically eligible households.
3. State procedures for determining income eligibility may annualize one or more months of household income to test against the Federal LIHEAP income standard. Therefore, some households may be income eligible for LIHEAP although their actual annual incomes are above the Federal LIHEAP income standard.
4. A State's use of assets tests and/or other program eligibility criteria could exclude an unknown number of income eligible households from receiving LIHEAP benefits.

Methodology

The following variables were used in classifying low income households for each State:

⁴Given the income eligibility requirements for public assistance programs, it is not expected that there are a significant number of categorically eligible households having incomes above the Federal LIHEAP income standard.

1. Household population, size, and residency as of April 1, 2000, and household income in 1999 (from the 2000 Decennial Census Sample Edited Detail File);⁵
2. The 1999 HHS Poverty Guidelines that were published in the *Federal Register* on March 18, 1999 (64 FR 13428-13430) and the FY 2000 State median income estimates that were published in the *Federal Register* on February 26, 1999 (64 FR 9513-9514).⁶

The following steps were followed in classifying and tabulating low income households, by State, from the 2000 Decennial Census Sample Edited Detail File:

1. Each State's HHS Poverty Guidelines for 1999 were multiplied by 1.5 to derive 150 percent of the HHS Poverty Guidelines, adjusted by household size.
2. Each State's FY 2000 median income estimate was multiplied by 0.6 to derive 60 percent of State median income, adjusted by household size.
3. Using household size, income, and residency, each household in the file was classified, by State, as being low income if its income was at or below the greater of 150 percent of the 1999 HHS Poverty Guidelines or 60 percent of the FY 2000 State median income estimate.⁷

Sample Estimates

Weighted sample data from the Decennial Census data are quite good relative to most other sources of comparable information. The data are unique in that their reliability and validity have been so well studied. Consequently, data users can be well informed about the quality of the data and the potential limitations of their use.

However, sample data are derived from the long-form questionnaire, as noted above. Sample data not only describe the particular set of households in the sample, but are primarily used to estimate the data that would have been obtained if a complete census count of the variables of interest was available. Weighted sample estimates can be expected to vary from complete-count results because they are subject to sampling and nonsampling errors, as described below. For further information on data limitations of the 2000 Decennial Census, see Chapter 8 of *Technical Documentation for Census 2000 Summary File 3* (SF3/15 (RV)) prepared by the U.S. Census Bureau, 2002 at: <http://www.census.gov/prod/cen2000/doc/sf3.pdf>.

⁵The 2000 Decennial Census collected information on income for calendar year 1999. April 1, 2000 represents the date on which the 2000 Decennial Census was taken. As of that date, the income eligibility criteria for LIHEAP generally would have been based on the 1999 HHS Poverty Guidelines and the FY 2000 State median income estimates that were in effect at the beginning of Federal Fiscal Year 2000 (October 1, 1999). Accordingly, there is a 3-month gap between December 31, 1999 (the date by which household income data for calendar year 1999 ended) and April 1, 2000 (the enumeration date for household population, size, and residency). For purposes of this project, it is assumed that household income for the period of April 1, 1999 to April 1, 2000 would not be significantly different than household income for the period of January 1, 1999 to December 31, 1999.

⁶The 2000 HHS Poverty Guidelines were published in the *Federal Register* on February 15, 2000. However, the 1999 HHS Poverty Guidelines were used in the classification of low income households. States were not required to use the 2000 HHS Poverty Guidelines for LIHEAP until October 1, 2000 (the beginning of Federal Fiscal Year 2001) or by the beginning of a LIHEAP grantee's fiscal year, whichever was later.

⁷See pages 4 and 6 for more information about the HHS Poverty Guidelines and the State median income estimates. Both the HHS Poverty Guidelines and State median income are adjusted by family income and family size. However, States make LIHEAP eligibility determinations based on household income and household size. Consequently, the income cutoffs for each measure are used for household income and size instead of family income and size.

Sampling Error

Sampling error is the chance error that results in estimating data, such as household income, from a sample rather than a complete count. This error arises from the selection of persons and housing units in the Decennial Census' sample of households receiving the long-form questionnaire. For example, if the sample happened to include disproportionately fewer low income households than in the general population, the low income sample estimates could be undercounted. The size of sampling error is relatively smaller if larger numbers of households are sampled, but relatively larger if smaller numbers of households are sampled. Relative to the 2000 Decennial Census' Public Use Microdata Samples (PUMS), the sample estimates from the 2000 Decennial Census Sample Edited Detail File are subject to smaller sampling error.⁸

Nonsampling Error

Nonsampling error, which affects both sample and complete count data, is the result of errors that may occur during the data collection and processing phases of the Decennial Census. Nonsampling errors include undercounting of persons and housing units, respondent errors such as the underreporting of income or misclassification of public assistance benefits, and errors during the clerical handling and electronic processing of questionnaires.

Definitions and Annotations

The definitions and annotations included below pertain to the classification of low income households, as displayed in the enclosed tables. The definitions and annotations are derived primarily from the 2000 Decennial Census, unless indicated otherwise.

HHS Poverty Guidelines

HHS publishes annual updates of the Poverty Guidelines in the *Federal Register* for use by poverty-related programs in determining the income eligibility of program applicants. The HHS Poverty Guidelines are a modified version of the statistical poverty thresholds which the Census Bureau publishes under guidance by the Office of Management and Budget.⁹

Households

For the 2000 Decennial Census, a household includes all persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person

⁸PUMS are computer-accessible files containing records that represent a sample of 1 percent or 5 percent of the housing units in the United States and the persons in them along with their characteristics. Each PUMS file provides records for States and some of their geographic levels. Within the limits of sample size and geographical detail, these files allow users to prepare virtually any tabulation that they require. The census Bureau has removed identifying information to protect the confidentiality of the respondents. The samples can be extended to analysis of the whole United States for many purposes. Comparative analysis across different groups is possible using the PUMS data.

⁹The thresholds are derived from a definition of poverty developed for statistical purposes by the Social Security Administration in 1964. The definition was revised based on the recommendations of Federal interagency committees in 1969 and 1980-1981. The thresholds are based solely on money income, and do not reflect the fact that a number of low income households receive noncash benefits. Annual revisions of the thresholds are based on changes in the Consumer Price Index.

living alone, two or more families living together, or any group of related or unrelated persons who share living arrangements.¹⁰ The household counts exclude persons living in group quarters.¹¹

The Census Bureau's definition of "household" serves to approximate the LIHEAP definition of household. The LIHEAP statute, as amended, defines household as:¹²

any individual or group of individuals who are living together as one economic unit for whom residential energy is customarily purchased in common or who make undesignated payments for energy in the form of rent.

Household Income

For the 2000 Decennial Census, household income represents the total monetary income received in calendar year 1999 by all household members 15 years old and over.

Household Size

For the 2000 Decennial Census, household size refers to the number of household members.

Income

For the 2000 Decennial Census, income represents total monetary income received in calendar year 1999, as estimated on a sample basis for all persons 15 years old and over. Total income is the sum of amounts reported separately for the following eight types of income:

1. Wages and salaries;
2. Nonfarm self-employment;
3. Farm self-employment;
4. Interest, dividend, or net rental income;
5. Social Security income;
6. Public assistance;
7. Retirement or disability income; and
8. All other income (includes unemployment compensation, Veterans Administration payments, alimony and child support, contributions received periodically from persons not living in the household, military family allotments, net gambling winnings, and other kinds of periodic income other than earnings).

¹⁰The Census Bureau distinguishes between family and nonfamily households. A family household is a household containing two or more members related by birth, marriage, or adoption. A nonfamily household is a group of unrelated persons living together or one person living alone.

¹¹A small variation in the counts of low income households, particularly for those households containing renters or boarders, could result in differences in how the Census Bureau and LIHEAP define households.

¹²Group quarters consist of people living in either institutions (e.g., mental hospitals, nursing homes, prisons, etc.) or other group quarters (e.g., military barracks, college dormitories, rooming houses with 10 or more unrelated individuals, etc.).

Income represents the amount of income received before deductions for personal income taxes, Social Security, bond purchases, union dues, Medicare deductions, etc. Receipts from the following sources are not included as income:

1. Money received from the sale of property (unless the recipient was engaged in the business of selling such property) the value of income "in kind" contributions from food stamps, public housing subsidies, medical care, employer contributions for persons;
2. Withdrawal of bank deposits;
3. Borrowed money;
4. Tax refunds;
5. Exchange of money between relatives living in the same household; and
6. Gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.

State Median Income

Estimates of the median income of 4-person families for each State and the District of Columbia are calculated for HHS by the Census Bureau. The State median income estimates for FY 2000 were based on: (1) the 1998 Current Population Survey, (2) the 1990 Decennial Census, and (3) 1997 per capita personal income estimates from the Bureau of Economic Analysis.¹³ HHS publishes annual updates of the State median income estimates in the *Federal Register* for use by LIHEAP programs.

Organization of the Tables

Data on the number and percent distribution of low income households are displayed in the data tables identified below. The tables are reiterated by the nine household income levels included in Table 1.¹⁴

<u>Table</u>	<u>Demographic Characteristic</u>	<u>Detail</u>
1.	Household income levels	Less than or equal to: 50% of poverty, 51%-75% of poverty, 76%-100% of poverty, 101%-125% of poverty, 126%-150% of poverty, 151%-175% of poverty, the greater of 175% of poverty, at or below 60% State median income, and the greater of 150% poverty or 60% State median income
2.	Gross income intervals	Under \$2,000, \$2,000-\$3,999, \$4,000-\$5,999, \$6,000-\$7,999, \$8,000-\$9,999, \$10,000-\$11,999, \$12,000-\$14,999, \$15,000 & over, and average household income

¹³For more information about the development of State median income estimates, see Census Bureau, Current Population Reports, Technical Paper No. 61, *Estimates of Median Four-Person Family Income, by State: 1974-89*. Government Printing Office, Washington, D.C., 1991.

¹⁴Each table includes weighted household numbers noted by "N" and percent distributions noted by "P" after the table number. The percent distributions may not sum to 100 percent due to rounding. Some tables add up to more than 100 percent when a household could be counted under more than one category for a demographic characteristic.

<u>Table</u>	<u>Demographic Characteristic</u>	<u>Detail</u>
3.	Sources of household cash income	Wages or salaries, self employment, interest, dividends & new rent, Social Security and railroad retirement, SSI, public assistance, retirement, and other ¹⁵
4.	Household size	Number of persons in the household (1, 2, 3, 4, 5, 6, 7 or more, and average household size)
5.	Race, ethnicity	White alone, Black or African American alone, American Indian and Alaska Native Alone, Asian alone, Native Hawaiian and other Pacific Islander alone, Hispanic, some other race alone, and two or more races, Hispanic or Latino (could be of any race)
6.	Target group	At least one person in a household who is 2 years or less, 3 years to 5 years, 5 years or less, 18 years or less, 60 years or older, 80 years or older, or a person with a disability ¹⁶
7.	Geographic location	Urban (in central place, not in central place, in urbanized area, in urban cluster) and rural (farm and nonfarm) ¹⁷
8.	Type of building	Mobile home, 1-family house detached, 1-family house attached, 2 units, 3 to 4 units, 5 to 9 units, 10 to 49 units, 50 units or more, boat, RV, van, etc.
9.	Year structure built	1939 or earlier, 1940 to 1949, 1950 to 1959, 1960 to 1969, 1970 to 1979, 1980 to 1989, 1990 to 1994, 1995 to 1998, and 1999 or 2000
10.	Tenure	Owner-occupied, renter occupied (with no utilities or utilities included in rent), and by fuel type (electricity, gas, oil, other--coal, kerosene, wood, etc). ¹⁸

¹⁵The household data for the category of "no cash rent" are also included as part of the data for the category of "renter occupied."

¹⁶A disability is a long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business. Individuals were classified on the 2000 Decennial Census as having a disability if any of the following three conditions were true: (1) they were 5 years old and over and had a response of "yes" to a sensory, physical, mental or self-care disability; (2) they were 16 years old and over and had a response of "yes" to going alone outside the home disability; or (3) they were 16 to 64 years old and had a response of "yes" to employment disability.

¹⁷The Census Bureau identifies and tabulates data for the urban and rural populations and their associated areas solely for the presentation and comparison of census statistical data. Detailed information about geographic location and the criteria used to delineate urban and rural areas can be found at: www.census.gov/geo/www/ua/ua_2k.html.

¹⁸The household data for the category of "no cash rent" are also included as part of the data for the category of "renter occupied."

<u>Table</u>	<u>Demographic Characteristic</u>	<u>Detail</u>
11.	Primary home heating fuel	Utility gas, bottled, tank, or LP gas, electricity, fuel oil, kerosene, etc, coal or coke, wood, solar energy, other fuel, and no fuel
12.	Annual household fuel costs	Self-reported annual fuel costs for owner- and renter-occupied housing units (no utilities included in rent, utilities included in rent), and for electricity, gas, and other fuels for owner occupied and renter occupied housing units

Excel Files

In addition to hard copy, the above tables are available on the Federal LIHEAP web site in separate Excel files and a zip file containing all of the tables. Each of the Excel files for Tables 2-12 include nine tabs—one for each of the following nine household income levels that are included in Table 1:

<u>Tab</u>	<u>Household Income Level</u>
a	Less than or equal to 50% of poverty
b	51%-75% of poverty
c	76%-100% of poverty
d	101%-125% of poverty
e	126%-150% of poverty
f	151%-175% of poverty
g	greater than 150% of poverty
h	at or below 60% State median income
i	greater of 150% poverty or 60% State median income